NEW FACULTY, CURRICULUM

The nurse anesthesia curriculum, faculty, and staff are changing in order to prepare to meet new accreditation standards and prepare for the doctoral program.

It has been a very busy year and there are many changes to share. The nurse anesthesia curriculum offered a new course, Advanced Health Assessment, this past fall. This course meets new requirements put forth by the Council on Accreditation of Nurse Anesthesia Educational Programs. This new course is currently undergoing evaluation and will incur some minor changes before it is offered to the next class.

Advanced Physiology and Pathophysiology I and II replaced Anatomy and Physiology I and II. Our thanks to Dr. Rebecca Katchmark and Dr. Mary Foss for their help in revising and redeveloping this course.

Principles of Anesthesia I and II have undergone some minor revisions. The curriculum has returned to a model where those with specific interests or experiences will teach topics. We have instituted the role of Course Coordinator to keep syllabi up to date, help faculty members identify and use university resources, and work directly with students to help assure their progress toward their goals. We are happy to welcome new and returning Principles of Anesthesia faculty members: Bonnie Peterson, Melinda Stone, Brian Kvamme, Wendy Sims, Ann Dryer, Carol Daniel, Carol Hunter, Jason Hoechst, Mary Skelley, and Course Coordinator Craig Hall.

New faculty members Ann Dryer and Joseph Kraska are working with Craig Hall to incorporate simulation of patient care into the Principles curriculum. First experiences have received outstanding reviews by our students. Additional simulation curricula will be added to the summer semester for senior students. They will participate in advanced patient care scenarios using the camera-equipped facilities in Brother Louis Hall.

Finally, because of changes in the certification examination and in anticipation of the DNP, the Professional Aspects curricula are being redeveloped. Pamela Larson taught the department management course this summer for the first time. Dawn Buhain is redeveloping the 3-credit professional aspects course for delivery in the summer. Topics are being streamlined in order to enable the addition of newer topics in consideration of the ongoing changes in the American healthcare system.

The Doctor of Nursing Practice (DNP) curricula, both the completion program for APRN’s and the entry-to-practice anesthesia DNP, have been completed and submitted to the Higher Learning Commission for approval and feedback. Sincere thanks go to Academic Dean Linka Holey, Academic Director Craig Hall, Associate Vice President Tracy Lehnartz, Clinical Coordinator Laura Mickelson, and Program Director Merri Moody for their work completing this important step in the process. We are hoping to start offering the DNP completion program for APRN’s completely online starting later in 2015.
Graduate Program in Nurse Anesthesia Newsletter

We are pleased to welcome Craig Hall to the Graduate Program in Nurse Anesthesia as the new academic director. Craig’s role will encompass a broad range of activities in the nurse anesthesia and Doctor of Nursing Practice programs, including curriculum review and design, development and construction, as well as assessment of learning outcomes. He will also work with current program faculty to provide support, mentoring, and evaluation of teaching. He will help to develop instructional technology, develop and deliver electronic testing for academic courses, help to select students for admission, and advise students throughout the academic portions of the program. He will also assist in the development of the DNP curriculum for the proposed Program. He may also teach from time to time.

Craig is a graduate of Saint Mary's nurse anesthesia program from the class of 1997. He loved being a student and enjoyed his classmates tremendously. He worked in nurse anesthesia for many years in a variety of settings but mostly at the Northfield Hospital (one of SMUMN’s clinical sites). When he started in Northfield they didn’t have Student Registered Nurse Anesthetists (SRNA) on site but Craig was able to work with Merri Moody and Tom Healy (then the GNA Clinical Director) to convince Northfield Hospital to take SRNA’s. He was the clinical coordinator for the site for many years and loved working with students.

Craig is a native Minnesotan and did his undergraduate work at the University of Minnesota (BSN’90), where he met his wife Cheryl. Cheryl is the Special Education Director of Faribault and Northfield schools. They have two adult daughters (mountain girls) who live in North Carolina (the Appalachians) and Montana (the Rockies). In his free time Craig loves to alpine ski, hunt, fly fish, and is building a cabin in Northern Minnesota.

Student Synthesis Paper Abstract

See all of the abstracts for the 2015 Student Seminar by following this link:
http://www2.smumn.edu/deptpages/~nap/Abstracts2014W.pdf

Intravenous Local Anesthetic Administration for Treatment Following Lung Aspiration
Jillian Pechacek RN, BSN and Jessica Wittenberg RN, BS

Purpose: Aspiration events complicate the management of patients undergoing anesthesia. Clinical interventions, such as following NPO standards and performing rapid sequence induction, are utilized by anesthesia providers to limit the potential for aspiration. There are no immediate pharmacological interventions to treat aspiration when it does occur. This paper aims to determine if local anesthetics should be incorporated into treatment for aspiration to attenuate aspiration pneumonitis.

Methods: A literature search was conducted using Google Scholar and SuperSearch databases. Nine experimental animal studies were selected from this search.

Results: The components evaluated in the studies were edema, hemodynamics, lung function, inflammatory markers, and bronchial alveolar lavage analysis. Based on the animal studies, local anesthetics reduced edema, improved lung mechanics, and decreased leukocytes and albumin in bronchial alveolar lavage fluid.

Conclusion: Local anesthetics have the potential to attenuate the immune response to lung injury when given before or after aspiration. However, there are too few current studies to draw reliable conclusions. Further studies should incorporate more comprehensive time intervals during testing and standardize the immune components measured.
**Is Surgical Infiltration of Depofoam Bupivacaine More Effective Than Bupivacaine Hydrochloride in Decreasing Pain and Opioid Consumption During the Postoperative Period?**  
Robert Gonzalez Jr., RN, BSN, CCRN and Kemo Marong RN, MAN

**Do Single-Use Laryngoscope Blades Provide the Same Clinical Performance as Reusable Laryngoscope Blades for Patient Intubation?**  
Gretchen Drangeid RN, BSN and Keith Maxwell Bull RN, BSN

**Do Transversus Abdominis Plane Blocks Provide Adequate Postoperative Analgesia After Laparoscopic and Open Abdominal Surgery?**  
Jennifer Malmberg RN, BSN, CCRN and Liliana Rascon, RN, BSN, CCRN

**Can the Intraoperative Use of Regional Oximetry With Near-Infrared Spectroscopy Help Guide Initiation of Blood Transfusions?**  
Erin Suntken RN, BSN and Amy Tin, RN, BSN

**Evaluation of Pulse Pressure Variation and Stroke Volume Variation to Optimize Fluid Administration in Patients Undergoing Major Abdominal Surgery**  
Jeremy L. Wilson RN, BSN, CCRN and Fred Nyabicha RN, BSN, CCRN

**Is Sugammadex More Effective Than Neostigmine/Glycopyrrolate for Reversing Muscle Relaxation?**  
Kyle Heffner RN, BSN and Adam Rogers RN, BSN

**Does Levosimendan Reduce Morbidity and Mortality for Patients With Low Ejection Fraction Undergoing Cardiac Surgery?**  
Michael D. Neumann, RN, BSN and Jeremy J. Brookins, RN, BSN

**Cancer Metastasis and Anesthetic Technique**  
Justin Bartos, RN, BSN and Daniel Fuller RN, BSN

**Intravenous Local Anesthetic Administration for Treatment Following Lung Aspiration**  
Jillian Pechacek RN, BSN and Jessica Wittenberg RN, BS

**Is Hydroxyethyl Starch Safe for Fluid Resuscitation in Trauma Patients?**  
Boe T. Brink, RN, BSN and Tyson L. Flohr, BS

**Localized Elastomeric Pain Pumps as Part of a Postoperative Pain Management Strategy for Cardiothoracic Surgical Patients**  
Alexa Honstad RN, BSN, CCRN and Rebekah Gramenz RN, BSN, CCRN

**Dexamethasone as an Adjunct to Local Anesthetics for Brachial Plexus Block**  
JoAnn Tran, RN, BSN, CCRN and Danhua Liu, RN, BA

**Effectiveness of Adductor Canal Blocks versus Femoral Nerve Blocks on Mobility and Pain Control For Total Knee Arthroplasty**  
Robert Arno, RN, BSN, CCRN and Brent Chiapusio, RN, BSN, CCRN

**Does Perioperative Treatment with Dexamethasone Decrease Postoperative Pain in Pediatric Patients Undergoing Tonsillectomy?**  
Michael P. Erickson, RN, BSN and Talon Johnson, RN, BSN

**Link to abstracts and registration form:**  
http://www2.smumn.edu/deptpages/~nap/Abstracts2014W.pdf
NEWS

Upcoming Events
◊ January 5, 2015 Spring Semester Begins
◊ April 3-6, Easter Break, Campus Closed
◊ April 17, Spring Semester Ends
◊ April 30 and May 1, Class of 2017 New Student Orientation
◊ May 16, Student Seminar

This Semester’s Classes
Juniors
◊ Principles of Anesthesia II
◊ Pharmacology
◊ Advanced Physiology and Pathophysiology II
◊ Clinical Practicum I

Seniors
◊ Clinical Practicum IV
◊ Comprehensive Exams Begin

Joshua (‘16) and Alecia Scharback, along with son Noah and daughter Flora, welcome Eve Marian Scharback! Eva was born at home, 5:04 a.m. on September 3, 2014. She weighed 7 pounds, 15 ounces and was 21 inches long.

CELEBRATE!
National Nurse Anesthetists Week
January 25-31, 2015

Nurse Anesthesia Program Staff
Merri Moody 612-728-5133
Program Director
Craig Hall 612-238-4544
Academic Director
Mary Skelley 612-728-5151
Clinical Director
Elise Riveness 612-728-5132
Administrative Assistant

www.smumn.edu/anesthesia

GRADUATE SCHOOL OF HEALTH AND HUMAN SERVICES
866-437-2788 • tcadmission@smumn.edu • smumn.edu

VOLUME 10, NUMBER 3
JANUARY, 2015
The nurse anesthesia program has more than 762 GRADUATES since 1953.

**TRANSSCRIPTS**
To obtain your transcript please send a request to the Assistant Registrar of the Twin Cities Campus. Please include your name, student ID number, the years of attendance, the number of transcripts needed, where you want them sent, and your signature.

**Assistant Registrar**
Saint Mary’s University of Minnesota
2500 Park Avenue
Minneapolis, MN 55404-4403

**VERIFICATION OF EDUCATION FOR EMPLOYERS**
In accordance with federal regulation, the student/alumni must give permission for any information to be released by the university. Verifications cannot be done over the phone. Please sign a consent form from your employer or send a request with your signature to:

**Assistant Registrar**
Saint Mary’s University of Minnesota
2500 Park Avenue
Minneapolis, MN 55404-4403
FAX: 612-728-5121

**STUDENT SEMINAR RESERVATION FORM**

| NAME: ____________________________________________ |
| ADDRESS: __________________________________________ |
| CITY / STATE / ZIP: __________________________________________ |
| AANA NUMBER: __________________________________________ |

**PLEASE MAKE CHECK OUT TO:**
GNA GRANT ACCOUNT 5309

Cost $65 - CRNA’s
$35 - Students

Application for 5 CE credits is in process

Please send application and registration fee to:
Saint Mary’s University of Minnesota
Nurse Anesthesia Program
2500 Park Avenue
Minneapolis, MN 55404
ATTN: Elise Riveness
Congratulations Class of 2014

The graduating Class of 2014 completed the final clinical day of the Nurse Anesthesia Program on August 15, 2014. We wish them all the best in their new careers.

Commencement Ceremony

Upcoming Events

- Sept. 1, Labor Day
- Sept. 2, Fall semester begins
- Oct. 12-14, MANA Meeting
- Nov. 5, Registration for Spring Semester begins
- Nov. 27 and 28, Thanksgiving Break
- Dec. 12, last day of the semester
- Campus Closed for the Holidays, Dec. 24 to 26 and Dec. 31 to Jan. 2,
- Jan. 4, Spring Semester begins
Clinical Faculty Needed

We are seeking CRNAs who are willing to help us teach students hands-on skills during labs. Our lab experiences take place at the Saint Mary’s University and at the Health Partners Clinical Simulation Center housed in Regions Hospital in St Paul. We are looking for a pool of 15 to 16 CRNA’s that could cover several different lab experiences. Experiences include simulated intubation and airway management, placement of regional blocks, ultrasonography, arterial and central line placement, bronchoscopy, and patient care simulation working with a high fidelity patient simulator. There is no preparatory work needed, you will receive information about the lab in advance. The pay rate, keeping our students tuition in mind, is $50 per hour, reduced tuition to the Student Seminar and an annual dinner to help us with annual planning and resource procurement. If you are interested please email: mmoody@smumn.edu.

Senior Presentation Topics for the 2015 Student Seminar

Students members of the Class of 2015 have just finished writing their proposals for their senior synthesis paper. As with previous classes, we have an excellent selection of interesting topics lined up for the 2015 Student Seminar scheduled for May 16, 2015. Next year’s topics include:

♦ Cancer Metastasis and Anesthetic Technique
♦ Intravenous Local Anesthetic Administration for Treatment of Aspiration-Induced Lung Injury
♦ Do Single-Use Laryngoscope Blades Provide the Same Clinical Performance as Reusable Laryngoscope Blades for Patient Intubation?
♦ Is Surgical Infiltration of DepoFoam Bupivacaine More Effective Than Bupivacaine Hydrochloride in Decreasing Pain and Opioid Consumption in the Postoperative Period?
♦ Can the Intraoperative Use of Regional Oximetry With Near-Infrared Spectroscopy Help Guide Initiation of Blood Transfusions?
♦ Does Levosimendan Reduce Morbidity and Mortality for Patients With Low Ejection Fraction Undergoing Cardiac Surgery?
♦ Can the Addition of a Localized Elastomeric Pain Pump to Current Pain Management Strategies Improve Patient Outcomes After Cardiothoracic Surgical Procedures?
♦ Is Sugammadex More Effective Than Neostigmine/Glycopyrrolate for Reversing Muscle Relaxation?
♦ Is Hydroxyethyl Starch Safe for Fluid Resuscitation in Trauma Patients?
♦ Effectiveness of Adductor Canal Blocks Versus Femoral Nerve Blocks on Mobility and Pain Control for Total Knee Arthroplasty
♦ Do Transversus Abdominis Plane Blocks Provide Adequate Postoperative Analgesia After Laparoscopic and Open Abdominal Surgeries?
♦ Does Preoperative Treatment With Dexamethasone Decrease Postoperative Pain in Pediatric Patients Undergoing Tonsillectomy?
♦ Laryngeal Mask Airway in Prone-Positioned Patients
♦ Evaluation of Pulse Pressure Variation and Stroke Volume Variation to Optimize Fluid Administration in Patients Undergoing Major Abdominal Surgery
♦ Dexamethasone as an Adjunct for Local Anesthetics for Brachial Plexus Blocks

Abstracts from these papers will begin to appear in the next newsletter along with registration information.
The Class of 2014 Student Seminar

INTRODUCTION

Anorexia nervosa (AN) and bulimia nervosa (BN) are eating disorders that affect millions of people in the United States.

- AN affects 1-2% of women
- BN affects 20-30% of women 15-39 years old
- Increased prevalence in past 35 years
DNP Program Update

Saint Mary’s University of Minnesota has been in the process of developing a Doctor of Nursing Practice (DNP) program. The first degree offered will be a 36 credit completion degree for Nurse Anesthetists and other master-level Advanced Nurse Practitioners. In accordance our Lasallian heritage and mission, the degree is designed to provide further opportunities to already proficient practitioners. The curriculum will contain the elements necessary for the DNP with an integrated focus in leadership. This DNP completion degree will be delivered in a fully online mode.

The outcome objectives and curriculum for DNP completion degree have been determined and they are under review by several current practitioners. The next steps include review by the University Curriculum Committee, scheduled for August 28, 2014, followed with a formal review by the Vice President of the Schools of Graduate and Professional Programs in September, 2014. The DNP materials will then be submitted to the Minnesota Office of Higher Education (MOHE) followed by submission to the Higher Learning Commission. We will continue to provide updates in the newsletter and on the Nurse Anesthesia Website.

National Night Out—Phillips Neighborhood

Saint Mary’s University holds as a priority its participation in events with the local Phillips Neighborhood of Minneapolis. Pictured above on the left is Schools of Graduate and Professional Programs Vice President Brother Robert Smith, FSC, Ph.D. during National Night Out. Next to Brother Robert is Scott McMahon, Associate Vice President for External Relations. Events such as this bring the community together and help celebrate partnerships formed over the years. Our thanks to all who stopped by and to our own Elise Riveness, program coordinator pictured right, who volunteered to help make this event a great success.
TRANSCRIPTS
For information on how to request an official transcript please use the following link: Office of the Registrar
We do not have copies of diplomas.

VERIFICATION OF EDUCATION FOR EMPLOYERS
In accordance with federal regulation, the student/alumnus must give permission for any information to be released by the university. Verifications cannot be done over the phone. Please sign a consent form provided by your employer or send a request with your signature to:

Registrar
Saint Mary’s University of Minnesota
2500 Park Avenue
Minneapolis, MN  55404-4403
FAX: (612) 728-5121

FALL SEMESTER
FIRST YEAR STUDENTS
◆ Advanced Physiology and Pathophysiology I
◆ Advanced Health Assessment for Nurse Anesthesia
◆ Principles of Anesthesia I
◆ Pharmacology for Nurse Anesthetists

SENIOR STUDENTS
◆ Clinical Practicum 3
◆ Synthesis Paper
◆ Professional Aspects: Department Management

Nurse Anesthesia Program Staff
Merri Moody
Program Director
Craig Hall
Academic Director
Mary Skelley
Clinical Director
Amy Swartz
Faculty
Elise Riveness
Program Coordinator

ATTENTION ALUMNI
If you have news, events, updates, or accomplishments that you would like to share, please send them to:
mmoody@smumn.edu

Find us on Facebook!

We’re on the Web!
www.smumn.edu/anesthesia

Saint Mary’s University of Minnesota
OF MINNESOTA
Members of the Class of 2016 comes to us from Minneapolis, St. Paul, Avon, Apple Valley, St. Louis Park, Wheaton, Saint Michael, and Duluth, MN; De Pere, Milwaukee, Campbell-sport, and Green Bay, WI; San Francisco, San Luis Obispo and Benicia, CA; Sioux Falls, SD; Matteson and Woodbridge, IL; Colorado Springs, CO; Saginaw, MI; Phoenix, AZ; Needham, MA; Las Vegas, NV; Austin, TX; and Columbia, MO.

Please join us in welcoming the newest members of the anesthesia community.

Applications for the Class Starting in 2015
The process for reviewing applications and selecting the next class began in April. Out of 187 applications, 60 candidates will finalize their applications by preparing a structured professional goal statement. Twelve candidates will join the class from the wait list.

NBCRNA Grant Remembers Tom Healey
The National Board for the Certification and Recertification of Nurse Anesthetists has donated funds to contribute to the professional development of Saint Mary’s students and staff in memory of Tom Healey who passed away in December. This generous contribution will support all Saint Mary’s students who register for the MN Association of Nurse Anesthetists Annual Meeting in October 2014 and staff who register for NBCRNA, American Association of Nurse Anesthetists, or Council on Accreditation of Nurse Anesthesia Educational Programs sponsored educational opportunities. We are very grateful to the NBCRNA for their help in funding these opportunities.
Anesthetic Considerations for the Patient With Congenital Long QT Syndrome

Jodie L. Lester, RN, CCRN

Long QT Syndrome is a congenital or acquired disorder of cardiac ion channels. The lethal polymorphic ventricular dysrhythmia that long QT syndrome can trigger is torsades de pointes, causing sudden cardiac arrest. Potentially effective treatments for managing patients with congenital long QT syndrome include beta-blocker therapy, sodium channel blockers, potassium-increasing drugs, implantable cardioverter defibrillator therapy, and left cardiac sympathetic denervation. Patients with a history of congenital long QT syndrome who require surgery present several challenges for the anesthesia provider. During induction these patients are more at risk of developing dysrhythmias from excessive catecholamine release, thus requiring premedications and maneuvers to be used to decrease the likelihood of such a surge. In addition, these patients require a baseline resting electrocardiogram to detect the prolongation in the QT interval and an electrolyte panel to identify any electrolyte abnormalities. Patients with a history of congenital long QT syndrome may require careful selection of anesthetic medications preoperatively, during induction, maintenance, emergence, and postoperatively. Anesthetic management should focus on minimizing excessive catecholamine release while maintaining adequate hemodynamic parameters and having accessible equipment and medications in preparation for torsades de pointes.

Is Chloroprocaine Superior to Lidocaine and Bupivacaine for Subarachnoid Block in the Outpatient Setting?

Elizabeth A. Cleary, RN, BSN, CEN, CCRN and Carissa R. Currier, RN, BSN, CCRN

Background: Same day surgery is increasing in the United States. Chloroprocaine is a local anesthetic that had lost favor in the anesthesia community, but it is regaining in popularity. This paper will address whether chloroprocaine is superior to lidocaine and bupivacaine for subarachnoid block in the outpatient setting.

Methods: PubMed was searched in order to obtain articles. Articles were chosen which focused upon chloroprocaine, spinal anesthesia, the outpatient setting, and lidocaine or low-dose bupivacaine.

Results: Chloroprocaine had a significantly faster recovery time from motor and sensory block than lidocaine and bupivacaine. Time until unassisted ambulation, spontaneous voiding, and hospital discharge were also faster for patients receiving chloroprocaine. Transient neurologic symptoms did not occur for any patients receiving chloroprocaine or bupivacaine, but did occur in patients receiving lidocaine.

Conclusion: Chloroprocaine is advantageous to lidocaine and bupivacaine for subarachnoid block in short ambulatory (< 60 min) procedures. The distinct advantages of chloroprocaine are an increased safety profile, faster block resolution, and earlier hospital discharge.
Saint Mary’s University of Minnesota Student Seminar
The annual presentation of our student’s thesis work.

Effect of Needle Selection on Post Dural Puncture Headache Risk Following Lumbar Puncture
Louie Arcenas, RN, BSN, Mark Walz, RN, BSN

Viscoelastic Assays as Predictors of Mortality After Acute Traumatic Injury
Brandon Alt, RN, BSN and Aaron M. Hall, RN, BSN

Are Closed-loop Anesthesia Delivery Systems Safer and More Effective Than Manual Delivery of Propofol in General Anesthesia
Jonathan Jensen, RN, BSN Shannon McCrory, RN, BSN

The Use of Dexmedetomidine for Planned Awake Fiberoptic Intubation
Benjamin Gillmer, RN, BSN, Travis Leigh Krumholz, RN, BSN

Are Sevoflurane and Nitrous Oxide Effective Analgesics During Stage 1 Labor?
Kaitlin J Huth, RN, BSN, Crystal Smith, BSN, CCRN

Intravenous Emulsified Isoflurane for Cardioprotection Against Myocardial Ischemic Injury in High-Risk Patients
Jeremy D. Johnson, RN, BSN, Amanda Hope Q. Gu, RN, BSN

Should Glidescope Video Laryngoscopy Replace Direct Laryngoscopy for Routine Endotracheal Intubations?
Julie Tait, RN, BSN and Heidi Haider, RN, BSN

Anesthetic Considerations for the Patient with Congenital Long QT Syndrome
Jodie L. Lester, RN, CCRN

Airway Ultrasonography to Confirm Correct Endotracheal Tube Position
Brian Jacobs, RN, BSN and Joseph Pruis, RN, BSN

Is Prophylactic Epidural Blood Patch as Effective as Other Means for Treating Post Dural Puncture Headache?
Rebecca Weaver, RN, BA

High Thoracic Epidural Anesthesia as the Sole Anesthetic in Coronary Artery Bypass Graft Surgery
Shirnyl Alviza, RN, BSN, Manita Dhungel, RN, BSN

Does the Use of Intracuff Alkalized Lidocaine Reduce Endotracheal Tube-Induced Emergence Phenomena?
Erika L. Beining, RN, BSN and Nancy R. Reiland, RN, BSN

Is Chloroprocaine Superior to Lidocaine and Bupivacaine for Subarachnoid Block in the Outpatient Setting?
Elizabeth A. Cleary, RN, BSN and Carissa R. Currier, RN, BSN

Medical Complications of Eating Disorders and their Effects on Anesthesia Delivery
Heather Marcella, RN, BAN, TNCC and Christine Strandquist, RN, BSN, CCRN, TNCC

Saturday, May 17, 2014
8:00 AM to 4:00 PM

Saint Mary’s University Center
2540 Park Avenue South
Minneapolis, MN 55404

Cost $60 – CRNA’s
$30 – Students

Continental breakfast, coffee, tea, soft drinks and lunch provided

This program received prior approval for 5 CE from the American Association of Nurse Anesthetists
Code Number: 1029349
Expiration Date: 5/17/2014

The registration form is located on the next page
Are Closed-Loop Anesthesia Delivery Systems Safer and More Effective Than Manual Delivery of Propofol in General Anesthesia?

Shannon M. McCrory, RN, BSN and Jonathan C. Jensen, RN, BSN

**Background:** Closed-loop anesthesia delivery systems (CLADS) use computer technology and bispectral index (BIS) monitoring to titrate propofol infusions in general anesthesia. The purpose of this paper is to determine if CLADS are more safe and effective than manual administration of propofol by anesthesia providers.

**Methods:** PubMed and Google Scholar databases were searched. Nine studies met review criteria.

**Results:** CLADS demonstrated better hemodynamic stability in 3 studies and showed no significant differences from the manual group in two studies. CLADS required less use of vasoactive drugs than manual titration of propofol in three studies. The CLADS group used less propofol compared to the manual group in four studies while two studies showed no statistical differences between groups. The CLADS group demonstrated more rapid recovery times compared to the manual group in four studies. The CLADS group maintained the target BIS range longer than the manual group in six studies.

**Conclusions:** The studies reviewed demonstrated that CLADS are safe and more effective than manual titration of propofol, however, current research has many confounding variables. Findings are inconclusive and more studies are needed with improved research designs to accurately compare CLADS to manual titration of propofol.
**This Semester’s Courses**

**NEW STUDENTS**
- (NA640) Chemistry & Physics
- (NA635) Professional Writing for Nurse Anesthetists
- (NA630) Professional Aspects of Nurse Anesthesia
- (NA606) Research Design & Statistical Analysis

**SENIORS**
- (NA781) Synthesis Paper Proposal
- (NA780) Clinical Integration
- (NA771) Clinical Practicum II

**GRADUATING SENIORS**
- (NA774) Clinical Practicum V
- (NA783) Synthesis Paper Presentation

Class of 2014 program completion date: August 20th.
Final Clinical Day: Friday August 15th.

---

**Should Glidescope Video Laryngoscopy Replace Direct Laryngoscopy for Routine Endotracheal Intubations?**

Heidi Haider, RN, BSN and Julie Tait, RN, BSN

Tracheal intubation is a necessary skill performed by anesthesia providers. Video laryngoscopy is technology that originally was made available to help aid visualization of anticipated difficult airways. Currently, many providers are utilizing video laryngoscopy for routine endotracheal intubations. The purpose of this review of literature is to evaluate if video laryngoscopy should replace direct laryngoscopy for routine endotracheal intubations.

A literature search was conducted using the PubMed/Medline and Google Scholar databases for research articles including information on direct laryngoscopy and video laryngoscopy. Two meta-analysis articles, 11 comparative studies, one observational study, and six case studies were selected for use in our review.

Generally, video laryngoscopy was found to take more time than direct laryngoscopy, first attempt to intubation was higher than direct laryngoscopy, and video laryngoscopy was found to improve the glottic view when compared to direct laryngoscopy. Hemodynamic measures were unchanged when comparing video laryngoscopy and direct laryngoscopy. Sore throat, dental damage, and tissue injury were complications seen with direct laryngoscopy and/or video laryngoscopy.

Because tracheal intubation is a necessary skill for anesthesia providers to have, information on different intubating devices and techniques is important to explore. This information will be helpful guiding providers to make knowledgeable decisions with their choices.

---

**Are Sevoflurane and Nitrous Oxide Effective Analgesics During Stage 1 Labor?**

Kaitlin J. Huth, RN, BSN and Crystal Smith, RN, BSN

**BACKGROUND:** Sevoflurane and nitrous oxide are commonly utilized in Canada, the United Kingdom, and other countries throughout the world as laboring anesthetics. However, they are infrequently used in the United States. Laboring parturients in the United States are most often being treated with an invasive neuraxial blockade to manage their pain. This review aims to determine whether nitrous oxide and sevoflurane are effective analgesics during the first stage of labor.

**METHODS:** Seven randomized control studies, two systematic reviews, and five background articles were chosen for review by searching PubMed, EBSCO MegaFILE, and Google Scholar databases.

**RESULTS:** Results were derived from measurements including visual analog scale (VAS), APGAR scoring in infants, SpO2 measurements and hemodynamic monitoring of the mother. Six trials found a significant decrease in VAS scores when sevoflurane or nitrous oxide was used. Four studies assessed SpO2 measurements and three found no significant change in the mother. Newborn APGAR scores were evaluated in two trials and neither found a significant difference between APGAR scores when comparing the use of nitrous oxide, sevoflurane or a placebo.

**CONCLUSION:** The use of sevoflurane or nitrous oxide during the first stage of labor provided effective pain control, stable hemodynamics in the mother and fetus, and higher satisfaction rates among laboring mothers when compared to control groups. Further studies could help support a change in evidenced-based practice utilizing sevoflurane and nitrous oxide as pain analgesics during the first stage of labor.
Happy Tenth Birthday!
The very first Graduate Nurse Anesthesia Program Newsletter was published in May of 2004. Our thanks for the many contributions by alumni and staff and to the many readers.

There have been 737 GRADUATES from 1952 through 2013

Were on the web!
www.smumn.edu/anesthesia

Commencement Ceremony: Class of 2014

The Commencement Ceremony for the Class of 2014 is planned for Sunday, June 1 at 11:00 AM. The ceremony is being held at the University Center, 2540 Park Avenue, Minneapolis. Parking is available on the street or in the parking lots behind the university. If you are an academic or clinical faculty member and would like to participate in the processional, please contact Elise Riveness at (612) 728-5132.

Though the students will not finish until August 20, this is one of the last times they will be together as a group before they start their new careers. The commencement exercises are followed by a reception.

Please join us!

SMU Anesthesia Students and Alumni Facebook Page Update
Launched in April 2009, there are now more than 265 members. To join, become a member of Facebook and look for Saint Mary’s Nurse Anesthesia Academic Groups or click on the link below. Currently, students are looking for job opportunities. Later this semester, students will be seeking paper ideas.

Saint Mary’s Anesthesia Facebook Page

TRANSCRIPT REQUESTS
To get your transcript, please use the following link:
Transcript Request Information
We do not have copies of diplomas.

VERIFICATION OF EDUCATION FOR EMPLOYERS
In accordance with federal regulation, the student/alumni must give permission for any information to be released by the college. Verifications cannot be done over the phone. Please sign a consent form from your employer or send a request with your signature to:

Assistant Registrar
Saint Mary’s University of Minnesota
2500 Park Avenue
Minneapolis, MN  55404-4403
FAX: (612) 728-5121

Program Staff

Merri Moody
Program Director
mmoody@smumn.edu

Mary Skelley
Clinical Director
mskelley@smumn.edu

Amy Swartz
Faculty
aswartz@smumn.edu

Elise Riveness
Program Coordinator
eriven@smumn.edu